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REMARKS

The Examiner notes that claims 1-24 are pending in the referenced application, that claims 1-4, 6-12, 14-20 and 22-24 are rejected, and that claims 5, 13, and 21 are objected to. In view of the following discussion, the Applicants submit that none of the pending claims is anticipated under the provisions of 35 U.S.C. §102 or obvious under the provisions of 35 U.S.C. §103. Thus, the Applicants believe that all claims are in allowable form.

REJECTION OF CLAIMS 1-2, 6, 9-10, 14, 17-18, and 22 UNDER 35 U.S.C. §102

The Examiner rejects claims 1-2, 6, 9-10, 14, 17-18, and 22 as being unpatentable over Wee et al. (United States Patent No. 6,104,441, issued August 15, 2000, referred hereinafter as Wee). The Applicants respectfully disagree.

Wee discloses an image editing system that permits manipulation of compressed elementary stream images without full decompression into the image domain. In particular, Wee teaches a method of using discrete cosine transform coefficients of dependent frames within a compressed elementary stream image sequence to incorporate DCT representations of anchor frames. This allows re-ordering of the frames in the compressed elementary stream domain without violating temporal dependencies. Frames can be cut and then re-ordered to overcome temporal dependencies on the eliminated frames. (See Wee, Abstract).

In contrast, the subject invention relates to splicing at the *transport stream* level, and where an in-frame/out-frame is encoded in a predefined termination in-point/out-point condition. Specifically, Applicants' independent claims positively recite:

1. A method for generating a splice point adapter, comprising the steps of:
identifying at least one out-frame within a transport stream, said out-frame representing a last frame of said transport stream to be included in a spliced transport stream;
decoding, for each identified out-frame, a respective portion of said transport stream including said out-frame; and

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re-encoding each decoded portion of said transport stream to produce a respective out-point adapter, each of said out-point adapters including a predefined terminating out-point condition. (Emphasis added.)

9. A method for generating a splice point adapter, comprising the steps of:
identifying at least one in-frame within a transport stream, said in-frame representing a first frame of said transport stream to be included in a spliced transport stream;

decoding, for each identified in-frame, a respective portion of said transport stream including said in-frame; and

re-encoding each decoded portion of said transport stream to produce a respective in-point adapter, each of said in-point adapters including an predefined initial in-point condition. (Emphasis added.)

17. In a system for processing transport streams, apparatus for generating a splice point adapter comprising:

a controller, for identifying at least one out-frame within a transport stream, said out-frame representing a last frame of said transport stream to be included in a spliced transport stream;

a decoder, responsive to said controller, for decoding each identified out-frame, a respective portion of said transport stream including said out-frame;
and

an encoder, for re-encoding each decoded portion of said transport stream to produce a respective out-point adapter, each of said out-point adapters including a predefined terminating out-point condition. (Emphasis added.)

As recited, an out-frame (or in-frame) is identified in a transport stream. A portion of that transport stream, including the out-frame (or in-frame), is decoded. The decoded portion is subsequently re-encoded to form an out-point (or in-point) adapter having a predefined terminating (or input) condition. The principles of the present

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invention enable universal in-point adaptors and out-point adaptors. Because such adaptors have ends (inputs or outputs) with predefined conditions, any out-point adaptor can be mated with any in-point adaptor. Specifically, Applicants recite, "It is important to note that the corresponding terminating out-point adapter conditions and initial in-point and conditions are not dependant upon the stream for which the adapter was initially created. Thus, the termination condition of the out-point adapter and the initial condition of the in-point adapter are compatible such that any in-point adapter may be concatenated to any corresponding out-point adapter to effect a splice." See the subject specification at page 25, lines 1-7. Wee fails to teach or suggest such features.

In contrast, Wee teaches splicing of elementary streams where it is necessary to eliminate temporal dependencies at the splice point for both image sequences. Specifically, Wee identifies the affected frames for both image sequences and then encodes the affected frames to eliminate temporal dependencies. In other words, Wee must evaluate every image sequence to determine which frames are affected in order to removed the temporal dependencies of those frames. Thus, Wee does not teach or suggest re-encoding each decoded portion to produce an out-point (in-point) adapter, where the out-point (in-point) adapter includes a predefined terminating out-point condition.

Since Wee fails to disclose or suggest the claimed invention, it is respectfully submitted that independent claims 1, 9 and 17 fully satisfy the requirements of 35 U.S.C. §102 and are patentable. Furthermore, claims 2, 6, 10, 14, 18, and 22 depend from those independent claims and are thus allowable. Accordingly, withdrawal of the 35 U.S.C. §102 rejections of claims 1-2, 6, 9-10, 14, 17-18, and 22 is respectfully requested.

REJECTION OF CLAIMS 3-4, 7-8, 11-12, 15-16, and 22-23 UNDER 35 U.S.C. § 103

The Examiner rejects claims 3-4, 7-8, 11-12, 15-16, and 22-23 as being unpatentable over the Wee et al. patent (United States Patent No. 6,104,441) in view of Chen et al. (United States Patent No. 5,917,830, issued June 29, 1999, herein referred to as Chen). The Applicants respectfully disagree.

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Chen teaches a method of terminating a primary stream without decompression such that a secondary stream can start without decoder problems. A start of signal initiates a search for a pre-splicing packet, which is the primary stream data packet closest to the start time that carries an anchor frame (an I or a P frame) start code. To prevent discontinuity at the decoder, the pre-splicing packet is processed to remove the anchor frame data and to insert "stuffing bytes" to replace the removed anchor frame data. The primary data stream is then terminated by the pre-splicing packet and the null packets. To maintain continuity at the decoder, primary stream identifying data (such as PID and PSI) is retrieved and inserted into the secondary stream.

Chen does not teach or suggest splice point adapters. As such, Chen fails to disclose decoding the transport stream, including the out-frame (or in-frame), and consequently does not teach or suggest re-encoding to form an adapter having a predefined terminating out-point (or in-point) condition. Thus, the substantial gap of Wee is not bridged by the teachings of Chen.

The Examiner has failed to present a prima facie case of obviousness in combining Wee with Chen to arrive at the claimed invention. Indeed, the Examiner has not shown that combining Wee and Chen would result in the subject invention, nor has the Examiner provided any suggestion or motivation to combine Wee and Chen.

Since the references, either singly or in combination, fail to disclose or suggest the subject invention, it is respectfully submitted that claims 3-4, 7-8, 11-12, 15-16, and 22-23 fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder. Accordingly, withdrawal of the 35 U.S.C. §103 rejections of claims 3-4, 7-8, 11-12, 15-16, and 22-23 is respectfully requested.

OBJECTION TO CLAIMS 5, 13, and 21.

Applicants thank the Examiner for indicating that claims 5, 13, and 21 contain allowable subject matter and that they would be allowable if rewritten in independent form. Responding to the Examiner, Applicants submit that those claims are not dependent on a rejected base claim for the reasons presented above. Applicants respectfully request the withdrawal of the objections to claims 5, 13, and 21.

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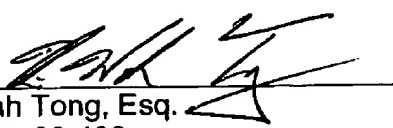
Conclusion

Thus, the Applicants submit that none of the claims presently in the application is anticipated under the provisions of 35 U.S.C. §102 or obvious under the provisions of 35 U.S.C. §103. Consequently, the Applicants believe that all these claims are in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring the maintenance of the present final action in any of the claims now pending in the application, it is requested that the Examiner telephone Mr. John M. Kelly, Esq. or Mr. Kin-Wah Tong, Esq. at (732) 530 9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

8/7/03


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